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JOINT ADVANCED WARFIGHTING SCHOOL

INCORPORATING VISION IN DEFENSE TRANSFORMATION

by

James R. Sears Jr.
Lieutenant Colonel, USAF

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Thesis Adviser: Professor Robert Antis

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14. ABSTRACT

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Analysis of the international security environment shows, though, that national-level transformation is required to end the Department of Defense's role as the first provider for any US crisis. Only through focused vision in Defense transformation can the US succeed in accomplishing future security objectives. This vision starts with a new definition of transformation, implements a transformation process, and bifurcates force and business practice transformation efforts. Through these recommendations, the Department of Defense will set the standard for national-level transformation.

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Introduction

The dogmas of the quiet past are inadequate to the stormy present. The occasion is piled high with difficulty and we must rise with the occasion. As our case is new, so must we think anew, and act anew.
      – Abraham Lincoln, Address to Congress, 1862

The term "transformation" conjures apprehension and distress in many military members. Transformation became the term to describe any change in the military after realization of the information age. With it came concepts like *effects based operations*, *systems-of-systems analysis*, *collaborative information environment*, and *network-centric warfare*, among others. Many officers see these concepts as threats to proven methods of conducting warfare and resist the concepts out of hand. Confusion is created in military circles as these concepts are forced into current operations before doctrine has changed.

An important issue in the transformation debate is a lack of understanding within the military of just what transformation is. The inadequate definition of transformation in the April 2003 Department of Defense *Transformation Planning Guidance* (TPG) has resulted in military transformation efforts not meeting national security objectives. Transformation must be seen as changing the fundamental nature of an object in appearance, character, condition, or function. Successful Defense transformation cannot occur without a defined problem to provide the impetus for change, vision to guide an orderly process, and leadership to ensure the change enables the military to more successfully execute national security strategy. It is the position of this paper that only

through focused vision of Defense transformation can the United States succeed in accomplishing future security objectives.

History abounds with successful – and unsuccessful – military transformations. General Donn Starry studied many of the successful transformations, recognized needs for change following the Vietnam conflict, and orchestrated the fundamental change in the US Army resulting in the Airland Battle doctrine successfully implemented in Operation Desert Storm. Gen Starry's approach provides an excellent process to guide transformation and will be examined in detail in Chapter 3.

The "near peer" competitor and technology dominated Defense thinking following the cold war. Defense policy and strategy throughout the 1990s focused on the search for a competitor who could directly threaten the US military in major conventional operations. The Clinton administration recognized the oncoming technological revolution and attempted to direct change based on modernizing the military. The focus on conventional operations and modernization led to institutional momentum toward a technological imperative to win conventional wars.

The Bush administration, beginning with the 2001 *Quadrennial Defense Review* (QDR), recognized the over-emphasis on major conflict and technology but has been unable to overcome that institutional momentum within a culture resistant to change forced from above. Changes in concepts, capabilities, and organizations were made because the opportunity was present, not because a need was first defined. The Office of Force Transformation did much to increase this resistance as it forced concepts on the Services with little regard for the doctrinal impact to ongoing operations. There was no

process to organize doctrine, concepts, capabilities, technology, and experimentation into a useable framework for successful Defense transformation.

This paper is designed to take the reader through the changes in defense strategy and approaches to transformation since the end of the Cold War and analyze why those efforts, thus far, have not resulted in their intended consequences. As a result, the 2006 QDR will not be included in the analysis since its effects have not been felt by the military.

A military transformation process is inadequate unless it enables a national-level transformation regarding how the US views security in the world today. The transformation process must appreciate the effects of globalization and information technology on international affairs and conflict. According to Thomas Friedman, globalization and information technology have created a world where individuals and nations both have the power to influence international events. Thomas Hammes describes the concept of superior political will as the threat in political, networked, and protracted warfare. National security analyst Thomas Barnett provides an approach to security with information technology as the connective tissue of globalization and the US must focus the efforts of all elements of national power toward linking security to globalization. Chapter 4 provides a detailed analysis of these concepts and describes the impetus for national-level transformation.

The steps taken by DoD and the military Departments following release of the 2006 QDR are critical to the focused vision of DoD transformation. The vision must acknowledge the discontinuity between the military's view of conflict and the reality of the international security environment. It will guide the Services to determine their core

competencies and divest the remainder. The concept of "jointness" should be elevated above the battlefield so the Pentagon can focus on networking with the interagency before, as well as during, conflict. Finally, by elevating jointness above the battlefield, DoD can provide resources to the other Departments and end its role as the first answer in a crisis.

This paper will ultimately de-mystify the concept of transformation and define it, explain how military transformation got to where it is today, and provide a new role for the Department of Defense in national level transformation. Recommendations will include a transformation process, a new transformation organization, and the vision required to lead them. This vision will lead to DoD setting the standard for transforming the national security apparatus and to fundamental change in the way the nation employs all elements of national power.

Chapter 2

Transformation, Vision, and Definition

There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.
                                        – Niccoló Machiavelli, *The Prince*, 1513

Why is the current transformation definition inadequate and how does it impact Service transformation efforts? The current transformation definition drives the Services toward technological solutions and provides a shortsighted approach to transformation. As change permeates the military without accompanying doctrinal change, confusion is created as forces implement a mixture of old and new. Current "transformations" become evolutionary or modernized attempts toward change, not transformational. The relationship between transformation, vision, and definition is essential to fundamental change.

"Transformation" in word, deed, or function, has not been fully embraced by the military. New concepts are dismissed out of hand because they are contrary to proven, historical methods of waging war. This lack of acceptance can be traced through the confusion of exactly what the word "transformation" means, how it is used, and from where its associated concepts originate. Once the reader understands the impact of culture on a term as nebulous as transformation, it will be clear transformation requires a new definition and vision to guide the process so the national security apparatus can move beyond employing power from stovepipes and toward utilizing all elements of

national power in a synergistic way. True vision lies in the culture change required for the military to embrace the process of transformation demanded by today's international security environment.

What is Transformation?

The first time a student considers the concept of transformation is probably in high school biology when learning about the transformation of a caterpillar into a butterfly. This is a useful lens to view transformation for the purpose of this paper. For defense transformation to succeed, the military student must first understand that in the end, a fundamental change will occur in the way the nation employs the military element of national power. Some non-military definitions may be helpful:

The verb "transform" is defined in the *Webster Collegiate Dictionary* as

> a: To change in composition or structure b: to change the outward form or appearance of c: to change the character or condition : CONVERT [1]

The American Heritage Dictionary refers the reader to the noun "metamorphosis" to define transformation:

> A marked change in appearance, character, condition, or function.
>
> *Biology.* A change in the form and often habits of an animal during normal development after the embryonic stage. Metamorphosis includes, in insects, the transformation of a maggot into an adult fly and a caterpillar into a butterfly and, in amphibians, the changing of a tadpole into a frog.[2]

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[1] *Merriam-Webster's Collegiate Dictionary: Tenth Edition*, (Springfield, Massachusetts: Merriam-Webster Inc., 1993): 1253.
[2] *The American Heritage Dictionary of the English Language*, Fourth Edition, (Houghton Mifflin Company, 2000), accessed at http://dictionary.reference.com/search?q=transformation on December 26, 2005.

The primary commonality between these definitions is the concept of changing the fundamental nature of an object in appearance, character, condition or function. The DoD *Transformation Planning Guidance* defines transformation as

> A process that shapes the changing nature of military competition and cooperation through new combinations of concepts, capabilities, people and organizations that exploit our nation's advantages and protect against our asymmetric vulnerabilities to sustain our strategic position, which helps underpin peace and stability in the world.[3]

One problem with the term "transformation" is the confusion between the *process* of transformation (an idea) versus the common understanding of transformation as a *result* of change (a thing). It is much easier to visualize transformation as something that has or will happen rather than an idea within which fundamental change occurs. Confusion is further created when every new idea or concept that involves change becomes "transformational." Another difficulty using the word transformation to define a changing military is that transformation is easier to define *after* it has occurred. However, transformation is a continuous process, not a destination.[4]

As one evaluates modernization, evolution, or transformation as types of change, the difference lies in the degree of change and the process guiding the change. If modernization were transformation, technology would be the answer. However, modernization results in incremental change rather than a new approach to waging war.[5] Technology is one agent of transformation, but not the only one.

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[3] Department of Defense, Office of Force Transformation, *Transformation Planning Guidance*, (April 2003), 3.

[4] James Belasco, *Teaching the Elephant to Dance: The Manager's Guide to Empowering Change*, (New York: Plume, 1990): 28.

[5] Richard Kugler and Hans Binnendijk, "Choosing a Strategy," *Transforming America's Military,* ed. Hans Binnendijk, (Washington D.C., National Defense University Press, 2002): 59.

Evolution is also an unacceptable concept of transformation, for evolution implies an

uncontrolled, meandering approach to change. *The American Heritage Dictionary*

defines evolution as

> 1. A gradual process in which something changes into a different and
> usually more complex or better form.
> 2a. The process of developing.
> 2b. Gradual development.[6]

This may lead to fundamental change, however it is a gradual process without a

purposeful direction; there is no impetus for change. Actual transformation normally

results due to changes either in the strategic environment or technology that require

fundamental changes that cannot be absorbed by modernization or evolution.[7] Therefore,

modernization and evolution are inadequate concepts of transformation.

There has been no focus for transformation. Even if there is no point in time when

the military will be considered "transformed,"[8] transformation still requires a purpose to

focus the process. Without purpose, the change resembles evolution more than

transformation. Change is taking place but there is no synergy in the myriad of changes.

There is no process to ensure changes made overcome any particular deficiency.

The Role of Vision

The critical step toward ensuring successful change in any mature organization is

defining a problem or building a sense of urgency.[9] Current force transformation vision

is focused on high-end, major combat operations. This vision has led to concepts and

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[6] *The American Heritage Dictionary of the English Language* , accessed at
http://dictionary.reference.com/search?q=evolution on April 2, 2006.
[7] Ibid.
[8] Donald Rumsfeld, "Secretary's Foreword," *Transformation Planning Guidance*, Office of Force
Transformation, (Washington D.C.: April, 2003): 1.
[9] Belasco, 20.

capabilities driving people and organizations without a new doctrine to define new ways of waging war in the twenty-first century. There needs to be a more compelling reason for transformation other than "Now is precisely the time to make changes."[10]

According to Alvin and Heidi Toffler, vision is understanding the world in which we live.[11] Vision is defined, for the purposes of this paper, by *The American Heritage Dictionary* as, "Unusual competence in discernment or perception; intelligent foresight."[12] Vision of this sort requires a leader who is able to recognize changing conditions, articulate the need and solution, and communicate new concepts clearly to ensure a legacy of the ideas for the future. General Donn Starry's reform of the US Army in the 1970s and '80s makes him a military example of this type of leader.[13]

Vision, though, is difficult to measure and therefore easy to ignore.[14] The technical aspects of net-centricity, Services maneuvering for budget share, and congressional dependence on expensive projects to hold constituencies, combine to provide the Services an avenue to continue to transform toward major combat operations at the expense of the stability and nation-building required following those operations. A focused vision of force transformation is required to get past these impediments and provide a military capable of conducting operations across the full range of military operations.

The forces resulting from this transformation must go beyond the current dependence on joint capabilities in tactical operations and become *mutually dependent* upon one another in both operations and business practices. Mutual dependence creates interwoven

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[10] Rumsfeld, 1.

[11] Alvin and Heidi Toffler, *War and Anti-War: Making Sense of Today's Global Chaos*, (New York: Warner Books, Inc., 1993): 3.

[12] *The American Heritage Dictionary of the English Language*, accessed at http://dictionary.reference.com/search?q=vision on January 4, 2006.

[13] Michael Evans, *Cultural Implications of Hardening and Networking the Army*, Australian Army, Chief of Army Exercise, 2004.

relationships of sufficient strength that it is difficult for one Service to perform a mission alone and impossible to acquire resources without inter-Service coordination. With mutual dependence, there is only enough overlap and redundancy to create connective tissue between the Services. It becomes natural for the Services to operate together at all levels.

Technology is only an enabler of transformation – it is a *means*, not the *ends.* While technology allows people to more efficiently communicate, compete, and collaborate, it does not, by itself, make the organization any better than it was before.[15] Technology must be allowed to network lower levels of command and allow them to make decisions instead of providing higher levels of situational awareness which trick senior leaders into believing they can make even more decisions.

Transformation has not been widely accepted for many reasons, but a primary reason is the strength of the military culture and its resistance to change. Culture is the strongest impediment to change and the stronger a culture the more resilient it will be.[16] Vision is required to overcome this cultural bias.

Vision is more than just direction of effort; it is important who initiates change and their relative position in the organization. According to Deal and Kennedy, "Change initiated by an insider often takes place much more quickly and penetrates more deeply in the organization than change urged on by an outsider."[17] One reason transformational terms and concepts have not been accepted is they are directed from the Office of the

[14] Belasco, 44.
[15] Thomas Friedman, *The World is Flat: A Brief History of the Twenty-first Century*, (New York: Farrar, Straus, and Giroux, 2005): 374.
[16] Terrence Deal and Allan Kennedy, *Corporate Cultures: The Rights and Rituals of Corporate Life*, (New York: Addison-Wesley Publishing Company, Inc., 1982): 159.
[17] Ibid., 164.

Secretary of Defense (OSD), an organization not necessarily viewed as an "insider." One

must ask if the Secretary of Defense, a political appointee with a maximum tenure of

eight years, is viewed as an insider and is the best person or office to *manage* change.

Applying the "transformation" label to every good idea has also been counter-

productive. Every new concept since *Joint Vision 2010* has been "transformational" to

ensure acceptance by political leadership. A concept or piece of technology that makes

something better is not a transformation, in and of itself. It may just be a better way of

getting the job done. Quite simply, vision is required to provide perspective and direction

for the change in the military.

The Impact of a Definition

The definition is the anchor for a concept as intangible as transformation. It must

provide a distinct starting point for a bureaucracy as large and entrenched as the

Department of Defense (DoD). OSD's definition does not guide fundamental change.

Instead, it focuses on "changing the nature of military competition and cooperation."

This directs the Services to create an entirely new warfare environment through concepts,

capabilities, people and organizations. This new environment is so open-ended that it

lacks focus and allows technology and concepts to drive change. Multiple changes are

made without aiming at distinct problems or requirements.

The *Transformation Planning Guidance* (TPG) was born out of a need for the Office

of Force Transformation to develop a strategy and plan for Defense transformation

following the 2001 QDR. Appendix 3 in the TPG provides Services guidance regarding

how to construct their *Transformation Roadmaps* to ensure consistency across the

Services. The first step directed in constructing a *Roadmap* is to use the definition

provided in the TPG (referenced on page 7 of this paper).[18] If the TPG definition is
inadequate, Service efforts will go off course from the beginning.

The current definition drives the Services toward modernization and evolution rather
than transformation. It is so general it does not focus efforts toward any goal. For
example, the Joint Warfighting Center *Joint Doctrine Pamphlet 3: Doctrinal Implications
of the Standing Joint Force Headquarters*, establishes the Standing Joint Force
Headquarters (SJFHQ) as an additive planning element based on utilizing enabling
capabilities (e.g. collaborative information environment and operational net assessment)
in parallel with the traditional J-code staff.[19] It is based on grouping expertise in a more
effective manner than the traditional staff to capitalize on horizontal integration and new
technical capabilities. The SJFHQ is not, however, a proposal to change the traditional J-
staff into a new functional organization.[20] Its impact on doctrine will be "due more to the
ripple effect of the enabling capabilities than to the [SJFHQ] itself" (emphasis added).[21]
In other words, planning will be modernized by enabling capabilities and the staff will
evolve through the ripple effect of those capabilities. This example will be re-examined
in Chapter 5 as part of the recommendations.

A New Definition

There are three criteria to a new transformation definition. First, it must direct a
continual process that allows for multiple changes to occur concurrently to meet defined
capability gaps or requirements. Second, the definition must direct doctrine level
solutions to the gaps or requirements. Finally, it must guide the process toward those

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[18] Department of Defense, *Transformation Planning Guidance*, (Washington D.C., 2003): 29.
[19] Joint Warfighting Center, *Joint Doctrine Series Pamphlet 3, Doctrinal Implications of the Standing Joint
Force Headquarters*, (US Joint Forces Command, Naval Station Norfolk, VA, June 16, 2003): 22.

solutions that are truly *transformational*, or lead to the fundamental change so critical to distinguish between modernization or evolution and transformation. This study proposes the following definition, which meets these criteria:

> Transformation is the continual process of developing doctrinal solutions to correct current or anticipated military deficiencies, resulting in fundamental changes to concepts, capabilities, people, or organizations, and a Defense Department better able to meet US national security objectives.

Figure 1: Proposed Transformation Definition

The remainder of this paper leads to the focused vision for this new definition of transformation. Chapter 3 examines the military cultural bias toward technological solutions to conventional operations. Chapter 4 describes transformation as a national level problem that requires farsighted leadership. Finally, Chapter 5 recommends the way ahead for Defense transformation based on lessons learned from "transformation" thus far in order to lead national level transformation.

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[20] Ibid., 22.
[21] Ibid., 24.

Chapter 3

Current Defense Transformation

At the heart of war lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of men, equipment, and tactics. It is fundamental to sound judgment.

- General Curtis E. Lemay, USAF, 1968

Chapter Two provided insight into the angst regarding change in the military. Transformation's lineage throughout the 1990s led to institutional momentum regarding technology as a panacea and the focus on a near peer competitor. It was thought that a technologically superior military force, capable of winning two nearly simultaneous "major theater wars," could prevail in all lesser contingencies.

The 2001 *Quadrennial Defense Review* and 2003 *Transformation Planning Guidance* were unable to diminish the effects of that momentum. Despite considerable rhetoric otherwise, the 2005 *National Defense Strategy* inherited a "paradox" of transformation: The military can only improve across the range of military operations as long as it remains the most capable at conventional operations.

This chapter will provide an example of a successful "transformation" of the US military and apply that logic to today. The paradox can only be resolved by organizing doctrine, concepts, and technology in a logical process that will eliminate the confusion created by transformational concepts and get the military focused on making the right changes to solve the right problems.

General Donn A. Starry: Successful Transformations

Before examining post-Cold War change in the US military, it will be helpful to examine General Donn A. Starry's generalized requirements for effecting change taken from his study of the successful implementation of mobile warfare in the German Army during the interwar years (see Table 1). The German general staff identified a need for change, developed the necessary programs to affect it, and had the competence in its ranks to develop the solutions.[22] Those who developed the change remained in those positions long enough to achieve consensus in the Army. Finally, adequate tests of the new doctrine were conducted and then subsequently taught throughout German professional military education.[23]

General Starry subsequently used this model to combine his experience in WWII and Vietnam with analysis of the 1973 Yom Kippur War to develop Airland Battle doctrine.[24] Gen Starry saw the need for fundamental change in the dejected US Army in order to defend against the Soviet Union. He and a small group of officers authored doctrine to resolve the problem. While they were marketing the doctrine to the lower ranks and upper echelons of the Army, equipment needs were identified and subsequent technology was developed and tested to implement the change. The previous military strategy of Flexible Response was transformed into Airland Battle.

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[22] Donn A. Starry, "To Change an Army," *Military Review,* (March 1983): 22.
[23] Ibid., 23.
[24] For more on the development of Airland Battle, see Martin J. D'Amato, "Vigilant Warrior: Gen Starry's Airland Battle and How Much it Changed The Army," *Armor: The Professional Journal of the US Army*, (May-June 2000): 18-46.

- An institution or mechanism to identify the need for change, draw up parameters for change, and describe what is to be done and how it differs from the past
- The educational background of the principal staff and command personalities responsible for change must be sufficiently rigorous, demanding, and relevant to bring a common cultural bias to the solution of problems
- There must be a spokesman for change
- The spokesman must build a consensus that will give the new ideas, and the need to adopt them, a wider audience of converts and believers
- Continuity among the architects of change so that consistency of effort is brought to bear on the process
- Someone at or near the top of institution must be willing to hear the arguments for change, agree to the need, support the new concepts, and champion the cause for change
- Changes proposed must be subjected to trials; relevance must be convincingly demonstrated to a wide audience, and necessary modifications must be made as a result of trial outcomes

Table 1: Starry's Generalized Requirements for Effecting Change[25]

To put it more succinctly, identification of a problem led to doctrine, which led to desired equipment (capabilities) to execute the doctrine, technology to have effective capabilities, and testing of all to ensure a valid doctrine. Marketing from above and below was critical to success. This led to the following process:

Problem $\Rightarrow$ Doctrine $\Rightarrow$ Equipment $\Rightarrow$ Technology $\Rightarrow$ Testing
Marketing throughout the process from within the military organization

Successful transformation requires an impetus for change (problem) and doctrine to drive the concepts. Those concepts, adequately marketed from within the organization, will lead to technological development to ensure successful doctrine is accepted.

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[25] Ibid., 23.

Change Through the 1990s

Gen Starry's transformation was demonstrated by the overwhelming success in Operation Desert Storm. The combination of Airland Battle doctrine, a US military designed to defeat the Soviet Union, and the perfect environment all led to the quick demise of Saddam Hussein's plans to control Kuwait.

The nation sought a significant peace dividend following the Cold War and Desert Storm. The competing demands of dwindling force structure, increasing military commitment, and fiscal responsibility were handled by the *Bottom Up Review* (BUR) in 1993 and the *Quadrennial Defense Review* (QDR) in 1997.

The BUR was largely characterized by a lack of focus on the future and the country's anticipation of a new or re-emerging Soviet Union. The post Cold War environment was termed "An Era of New Dangers," defined, as it related to the military, by the proliferation of nuclear, biological, and chemical weapons and major regional conflict.[26] This focus resulted in a force-structuring concept to fight two nearly simultaneous major regional conflicts, one in the Middle East and the other on the Korean peninsula.[27] The BUR guided force modernization programs to maintain US technological superiority in weapons and equipment to achieve quicker victory with fewer casualties as they approached major regional conflict.[28]

The 1997 QDR attacked post-Cold War efforts based on maintaining readiness at the cost of addressing modern technology and the future.[29] The QDR acknowledged the increase in military operations tempo and the full spectrum of contingencies experienced

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[26] Office of the Secretary of Defense, *The Bottom-Up Review*, (Washington D.C., September 1, 1993): 1.
[27] Ibid., 10.
[28] Ibid., 4.

since the fall of the Berlin Wall but maintained the focus on fighting and winning two nearly simultaneous regional conflicts, renamed as major theater wars.[30] Secretary Cohen declared the military could handle the entire spectrum of contingencies by designing a force that could fight and win a major theater war, which was defined as "…the most stressing requirement for the US military."[31] The concept of a "near peer competitor" started with QDR "regional great power analysis."[32]

Transformation was viewed as both modernization and evolution in the 1997 QDR. Transformation was codified as a revolution in military affairs based on modernizing current force structure and introducing new technology.[33] Chairman of the Joint Chiefs of Staff, General Shalikashvili called transformation, "A process of balanced evolution toward revolutionary capabilities."[34] These new capabilities would allow the military to trim current forces to stabilize future investment.[35] While the QDR was an initial look at the full spectrum of contingencies and transformation, it was driven by fiscal imperatives and failed to define a new strategy or force-structuring concept.

The US military emerged from the 1990s with an institutional momentum toward transforming technology and concepts without developing a process to ensure focused change. The concept of near simultaneous major theater wars drove mission and force structure. This led to the search for a near peer competitor and the idea that a high-end, conventional military would be successful across the spectrum of conflict. Technology would allow a smaller defense to still succeed at conventional war. Since technology

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[29] Office of the Secretary of Defense, *Report of the Quadrennial Defense Review*, (Washington D.C., May 1997): iv.
[30] Ibid., 12.
[31] Ibid.
[32] Ibid., 24.
[33] Ibid., 39.
[34] Ibid., 67.

equaled transformation, the formula for successful transformation was modernization plus evolution: Modernize the technology and the force structure will evolve to better use it.   Technology drove the equipment, which would eventually drive the doctrine for the future.

Bush Administration and Transformation

The 2001 QDR began with the President Bush's intent to transform the military to meet future security challenges.[36] Much of this intent originated with Secretary Rumsfeld's ideas that Cold War processes in the Pentagon had not been removed by the technologically focused transformation debate coming out of the Clinton Administration.[37] The *Transformation Planning Guidance* was born out of the QDR to fully develop the strategy for transforming the Department from an industrial age organization to one designed to operate in the information age.

There are two common misperceptions about defense transformation Secretary Rumsfeld has thus far been unable to correct. The first is that transformation is only about technology. Michael Evans says this is because all militaries tend to place undue emphasis on technology when attempting to drive change. The OFT definition places the importance of transformation on changing concepts, capabilities, people, and organizations. Secretary Rumsfeld considers the first step toward transformation to be changes in *processes* required due to changes in technology and the security environment

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[35] Ibid., 22.

[36] President George W. Bush, "President's Message to Congress," *A Blueprint for New Beginnings: A Responsible Budget for America's Priorities*, (US Government Printing Office, Washington, D.C., February 28, 2001): 3.

[37] Thomas Barnett, *Transcript of "Esquire" Interview with Secretary of Defense Donald Rumsfeld, April 21, 2005*, accessed at www.thmaspmbarnett.com/weblog/archives2/002370.html on December 8, 2005.

following the Cold War. These process changes will subsequently result in fundamental changes in the way the US wages war.[38]

The second misperception is that the "network" in Network Centric Warfare (NCW) is the network of computer terminals, satellites, unmanned aerial vehicles, radios, and hand-held communication devices inherent in NCW. While the technological aspects of the information age are the basis of change, the transformation does not occur until the people and processes using the technology have created a fundamental change in how all that military hardware is utilized.

Secretary Rumsfeld's original concept of transformation has not been realized. The Services are carrying the momentum for finding technological answers for a near-peer competitor in the 1990s into current transformation efforts.

2001 Quadrennial Defense Review

The 2001 QDR attempted to distance the Bush administration from the previous lack of a coherent strategy and meandering transformation efforts. It accomplished this through a new assessment of risk and uncertainty, attempting to move the focus from major theater war to a more holistic force-shaping construct, and developing a strategy to encompass all of the above.

The QDR envisioned two main problems necessitating a changed defense strategy and force transformation: first, uncertainty in the global security environment in the form of geopolitical change and new technology; and second, the reduced accessions of the 1990s which had decreased readiness and infrastructure to dangerously low levels.[39] The

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[38] Barnett, *Transcript*.

[39] Office of the Secretary of Defense, *Quadrennial Defense Review Report*, (Washington D.C., September 30, 2001): 3 and 8.

results were a new strategy of assuring allies and friends, dissuading future military competition, deterring threats and coercion, and decisively defeating an adversary when deterrence fails (ADDD) as well as transformation focused on concepts, capabilities, and organizations.

ADDD exchanged previous strategic planning for a Northeast and Southwest Asia based threat model for a capabilities based approach to strategy and a force structure that acknowledged the multitude of extra demands placed upon the military. The military could no longer plan for two specific major theater wars due to uncertainty in the international security environment.[40] A key to uncertainty was the means an adversary might use against the US, including information operations; space warfare; chemical, biological, radiological, nuclear, or enhanced high explosive weapons (CBRNE); ballistic or cruise missile attacks; or terrorism.[41]

The spectrum of conflict ranged from regional threats to failing states to non-state actors with unpredictable motivations and capabilities.[42] However, the capabilities based approach to planning retained options for large-scale conventional war by maintaining the need to be successful in major combat operations in two separate, but overlapping, regional conflicts and accomplish regime change in one of those.[43] The force structure required to implement the ADDD strategy would be based on defending the homeland, forward deterrence in four critical regions, swiftly defeating aggression in overlapping

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[40] Ibid., 14.

[41] Asymmetry is referenced throughout the 2001 QDR but is described on page 38 as adversary strategies attempting to acquire similar capabilities as the US including *information operations*, *space warfare*, and *CBRNE weapons* and on page 62 as future adversaries using the asymmetric approaches such as *terrorism*, *information operations*, and *ballistic and cruise missile attacks* to undermine US military strength.

[42] Ibid., 5.

[43] Ibid., 17.

major conflicts, decisive victory in one of them, and conducting a limited number of small-scale contingency operations (1-4-2-1).[44]

Transformation of concepts, capabilities, and organizations would allow the military to prevail in new forms of warfare resultant from technological innovation (information and space warfare) and also cause fundamental changes in the nature of air, land, and sea warfare.[45] This transformation was based on six operational goals and would balance current operational needs with transformation over time (see Table 2).[46] Information and communications technologies would allow highly distributed forces to have better situational awareness and maximize effectiveness.[47] The transformation of the armed forces would create a broad portfolio of capabilities to handle the full spectrum of conflict in the new geopolitical landscape.[48]

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[44] Ibid.
[45] Ibid., 29.
[46] Ibid., 30.
[47] Ibid., 31.
[48] Ibid., 17.

- Protecting critical bases of operations (US homeland, forces abroad, allies, and friends) and defeating CBRNE weapons and their means of delivery
- Assuring information systems in the face of attack and conducting effective information operations
- Projecting and sustaining US forces in distant anti-access and area-denial threats
- Denying enemies sanctuary by providing persistent surveillance, tracking, and rapid engagement with high-volume precision strike, through a combination of complementary air and ground capabilities, against critical mobile and fixed targets at various ranges and in all weather and terrains
- Enhancing the capability and survivability of space systems and supporting infrastructure
- Leveraging information technology and innovative concepts to develop an interoperable, joint C4ISR architecture and capability that includes a tailorable joint operational picture

Table 2: 2001 QDR Operational Goals for DoD's Transformation Efforts

DoD business practices and infrastructure were to be modernized through the transformation process as well.[49] DoD would streamline and flatten the organization, focus on core competencies that contribute directly to warfighting and divest those that do not, modernize the approach to business information, and consolidate and modernize base infrastructure.[50] A key part of focusing on core competencies was to identify functions that can be provided by the private sector and move those out of DoD. The ensuing change would result in a culture that rewards innovation and risk-taking among fighting forces and support personnel.[51]

The 2001 QDR, as a work done primarily before 9/11, can be seen as an optimistic approach to changing warfighting and administrative processes, as well as maintaining warfighting responsibilities while at the same time overcoming the acquisition holiday of

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[49] Ibid., 51.
[50] Ibid., 53.
[51] Ibid., 52.

the previous 10 years. Some modifications were made following 9/11, but the Secretary

felt it still met the needs of the military. While ADDD and 1-4-2-1 placed renewed

emphasis on the full spectrum of conflict, they still focused on major combat operations,

exemplified by the Chairman's remarks that

> This assessment includes the most demanding scenario where US forces
> respond to two overlapping major crises in different regions, decisively
> defeating one adversary while defeating the efforts of the other.[52]

Transformation professed a parallel approach to changing concepts, capabilities, and

organizations but the organizational goals still maintained the focus on technology to

modernize forces. As with the 1997 QDR, the belief was that if you build the technology,

the concepts will follow.

Transformation Planning Guidance

The 2001 QDR established the Office of Force Transformation (OFT) in OSD and

mandated each Department develop a transformation roadmap. The resulting

Transformation Planning Guidance (TPG) was OFT's first attempt for transformation to

be placed in context of a post 9/11 world. Despite this opportunity, the TPG merely

reaffirmed the technological focus of the 2001 QDR and assigned roles and

responsibilities throughout DoD to implement transformational capabilities.

Secretary Rumsfeld's desire to change processes and mindsets throughout the

military was intended to create a concept for transformation beyond MCO and

technology. However, his desired outcome for transformation in his forward to the TPG

falls short of that goal: "Fundamentally joint, network-centric, distributed forces capable

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[52] General Hugh Shelton, "Statement of the Chairman of the Joint Chiefs of Staff," *Quadrennial Defense Review Report*, (Washington D.C., September 30, 2001): 70.

of rapid decision superiority and massed effects across the battlespace."[53]

Transformation is further defined by the vision of the TPG as a "Smaller, more lethal and nimble joint force capable of defeating an adversary throughout the depth of the global battlespace."[54]

The TPG and follow-on documents, *Military Transformation: A Strategic Approach* and *Elements of Defense Transformation*, further fail to move Service efforts away from the institutional momentum toward major combat and technology. OFT places the need for transformation into four imperatives: strategy, technology, threat, and risk mitigation.[55] The strategic imperative is for US forces to deter or react from a forward posture and, if required, swiftly defeat potential adversaries. The technological imperative is clearly the move from the industrial age to the information age. The threat imperative is resident in the concept that weaker foes (which is everybody if the US is the sole superpower) will use various techniques to defeat overwhelming US military power. The US must mitigate the risk in the uncertain threat environment by managing four types of risk: Force management, operational, future challenges, and institutional.[56] Transformation should result in a force that is "more expeditionary, agile, and lethal…and more capable of employing operational maneuver and precision effects capabilities to achieve victory."[57]

The TPG is focused on transforming the military to more rapidly conduct major combat operations. Swiftly defeating an adversary is central to the strategy to prevent

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[53] Rumsfeld, 1.
[54] Office of Force Transformation, Office of the Secretary of Defense, *Transformation Planning Guidance*, (Washington D.C., April 2003): 17.
[55] Director, Force Transformation, Office of the Secretary of Defense, *Military Transformation: A Strategic Approach,* (Washington D.C., 2003), 12.
[56] Ibid., 16.

large forces from being engaged for long periods of time. [58] The transformed force will

be able to conduct operations previously unimaginable for their prohibitive risk and

cost.[59] The historic "window of opportunity" can only remain open for force

transformation as long as US forces are significantly more capable at conducting

conventional operations than our most potent regional adversary.[60] This creates a

paradox of transformation: In order to transform forces to meet new challenges they must

concomitantly transform to maintain superiority in major combat operations ..

The key to the transformation strategy is the development of Joint Operating

Concepts (JOCs) of homeland security, stability operations, strategic deterrence, and

major combat operations. The joint force would simultaneously develop joint concepts

and desired capabilities so the Services can determine the organizational structure,

concepts, doctrine, and personnel skill sets required to meet each JOC. [61]

The three-part strategy for transformation begins with Secretary Rumsfeld's original

concept of transformation by first developing an adaptive culture and leadership that

encourages innovation and then transforming the processes for capabilities identification

and strategic analysis.[62] The third part, transformed capabilities through force

transformation, rests on the four pillars of transformation (see Table 3). The pillars were

designed to balance near-term operational needs against the future risk of specific

technologies, which must be invested in today, to further transform the force. Investment

in the four pillars will create network-centric command and operational forces capable of

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[57] Director, Force Transformation, Office of the Secretary of Defense, *Elements of Defense Transformation*, (Washington D.C., 2004): 8.
[58] *Transformation Planning Guidance*, 4.
[59] Ibid.
[60] Ibid., 5.
[61] Ibid., 29.
[62] Ibid., 8.

adaptive planning, effects based operations, defeating potent anti-access environments,

unparalleled C4ISR (command, control, communications, computers, intelligence,

I. Strengthening joint operations through standing joint task force headquarters, improved joint command and control, joint training, and an expanded joint forces presence policy
II. Experimenting with new approaches to warfare, operational concepts and capabilities, and organizational constructs such as standing joint forces through wargaming, simulations and field exercises focused on emerging challenges and opportunities
III. Exploiting US intelligence advantages through multiple intelligence collection assets, global surveillance and reconnaissance, and enhanced exploitation and dissemination
IV. Developing transformational capabilities through increased and wide ranging science and technology, selective increases in procurement, and innovations in DoD processes

Table 3: Four Pillars of Transformation

surveillance, and reconnaissance), and superior situational awareness.[63] These forces are

required to implement the ADDD defense strategy and accomplish the six operational

goals mentioned earlier. Thus continues the paradox in transformation.

Guidance to the Services is included in Appendix 3 of the TPG. Each Department

must address how it will develop operational concepts and doctrine to meet the six

operational goals in support of the four JOCs.[64] Services must address interoperability

priorities and efforts to ensure information can be brought together in a coherent, timely

manner. The roadmaps must identify the metrics used to measure progress toward

transformation.

The TPG included transformational business practices and the requirement to

consider inter-agency and multi-national needs in transformation. However, these are

overwhelmed by the focus on technology and major combat operations still prevalent

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[63] Ibid., 10.

throughout the transformation discussion. The six operational goals and four pillars are still tech-centric and focused on efficiency in traditional, conventional combat. By measuring Service transformation efforts against the goals and pillars, OSD forces the Services to experiment, develop, and train toward technological answers to conventional questions.

This approach to transformation, unlike earlier efforts, does define a problem for the transformation to overcome. However the problem is not strategic, operational, or tactical in nature, but rather is an institution unwilling to accept change. The force for this change comes from the top and is directive. The transformation definition focuses on concepts, capabilities, people and organizations to change the nature of military competition. Concepts finally drive technology in the TPG, but concepts are not doctrine. Technology is still being developed in the hopes of developing new forms of warfare, solving an unidentified problem, and writing the doctrine to execute this changed warfare.

OFT published a more detailed vision in late 2004 in its *Elements of Defense Transformation*. This vision continues to focus on high-end, major combat operations. OFT acknowledges information age warfare is still developing but sees the future force as a joint, network-centric force capable of executing effects-based operations enabled by network-centric warfare (NCW). [65] NCW is seen as the emerging way of war for the information age and viewed as the critical change as the world moves from the industrial age to the information age. The current vision for future warfare is embodied in NCW as a linking of people, platforms, weapons, sensors, and decision aids. According to OFT,

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[64] Ibid., 29.
[65] *Elements of Defense Transformation*, 8.

> NCW is characterized by the ability of geographically dispersed forces to attain a high level of shared battlespace awareness that is exploited to achieve strategic, operational, and tactical objectives in accordance with the commander's intent.[66]

Therefore, the vision guiding transformation is the implementation of NCW. This vision results in two main problems for defense transformation: (1) The network, as envisioned by OFT, is focused on swiftly defeating major adversaries quickly; and (2) technology is the backbone of the network. Thus the institutional momentum of the 1990s continues to drive the Services to spend a preponderance of resources and time transforming to defeat a conventional adversary. Concepts are ahead of technology but fail to provide a focal point for transformation efforts.

2005 National Defense Strategy

The timing of strategy and transformation documents in the Bush administration has been problematic. The 2001 QDR was primarily worked before 9/11 but released after. OFT authored the TPG before Operation Iraqi Freedom and released it before the insurgency that holds a large number of US military forces in Iraq today. The 2005 National Defense Strategy (NDS), a first of its kind, was the chance for OSD to put transformation in perspective of this evolving international security environment and its unique requirements. It established security as more relevant than major combat operations and transformation as more than technology.

The NDS acknowledges the security environment is still changing but has become clearer since 9/11 and conflict in Iraq. Danger can come from weak states or ungoverned

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[66] Ibid.

areas due to globalization and proliferation of WMD.[67] It uses the 9/11 attacks to show the US can no longer wait and react to an attack and will perform an "active defense" of the US and its interests. Threats to US and partner interests can come from terrorism or regional threats to security. The defense establishment must be prepared for long-duration conflict amid continuous transformation.[68] Alliances and partnerships will be critical in establishing security.[69]

Many aspects of the 2001 QDR were retained in the 2005 NDS. ADDD remains the strategy but "defeat" is now a clear attempt to focus the military on the war on terror.[70] The 1-4-2-1 force shaping construct remains. The military is still required to mitigate operational, future challenge, force management, and institutional risks. Network-centric operations remain primarily a technological discussion. A capabilities based approach to defeat the spectrum of challenges is still the focus instead of who or where an adversary might be.

The four Strategic Objectives of the NDS embody the change in emphasis from regional conflict to active defense.[71] The objective is to secure the US from direct attacks using catastrophic violence, especially from extremist organizations using WMD. Next, strategic access and global freedom of action are stated as being critical to the security of the US and its partners. Third, the US must expand the "community of nations" through alliances and partnerships to collectively achieve common interests. Finally, the US will

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[67] Office of the Secretary of Defense, *The National Defense Strategy of the United States of America*, (Washington D.C., March, 2005): 1.
[68] Ibid., 2.
[69] Ibid., 7.
[70] Ibid., 9.
[71] Ibid., 6.

establish favorable security conditions by working with others to establish a common view of future threats.

The concepts of uncertainty and transformation were retained, but both carry new meaning in 2005. Uncertainty is defined as the emergence of four challenges: traditional, irregular, catastrophic, and disruptive.[72] The US military "predominates" traditional forms of warfare and must maintain this capability. As a result, adversaries will seek to challenge the US through non-traditional, or asymmetric methods and the military must re-orient toward irregular (e.g. terrorism or insurgency) forms of warfare. The US must be able to dissuade, deter, or defeat catastrophic (i.e. weapons of mass destruction) attacks before they occur. Finally, disruptive technological breakthroughs must be hedged against to prevent others from equalizing US advantages.

The discussion on transformation subtly warns the Services of a shift in emphasis from technology to other areas of the establishment. Transformation is now about changing the perspective regarding challenges and opportunities, adapting the Department to this new perspective, and refocusing capabilities toward the new challenges.[73] The US is in an enduring struggle against "persistent, adaptive adversaries," and must "transform to win the war [on terrorism]."[74] The 9/11 attacks provided the impetus for transformation and the war on terror is now the guiding principle.

Stability Operations emerged as a Joint Operating Concept in 2003 and is a major addition to the NDS over the previous QDR. Units must be trained for stability

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[72] Ibid., 3.
[73] Ibid., 10.
[74] Ibid.

operations to better meet irregular challenges.[75] The US must improve the ability to transition from military to civilian led stability operations and the ability to train indigenous forces is critical in that effort.[76]

The 2005 NDS attempted to counter the paradox in transformation with a re-affirmation of the defense strategy and renewed emphasis on essentially all threats other than traditional. However, implementation and force structure still fall short of the strategy. The NDS appears to be a warning to the Services that significant change is coming in the 2006 QDR. However, it intermingles the concepts of major combat operations and small-scale contingencies to the point of clouding the focus. The strategy is clearly dependant upon partnerships and strategic access. Security is based on the actions of sovereign nations with non-state actors remaining on the periphery.[77] The NDS attempts to distance the concept of transformation away from its technological focus but provides the Services and option for technology by saying they should extend key advantages and reduce vulnerabilities.[78]

The NDS approaches transformation by beginning with solving the problem of winning the war on terror. However, instead of driving doctrine development to solve the problem it still focuses concurrently on experimental concepts and capabilities to meet the challenge. Transformation is still a "top-down" process to force change.

It is too early to determine the impact of the 2006 QDR on military transformation, but initial details are telling. Despite "Long War" rhetoric and post-9/11 reality, the 2007 defense budget still funds several large, conventional programs while shrinking the army

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[75] Ibid., 15.
[76] Ibid.
[77] Ibid., 4.
[78] Ibid., 10.

over the same time.[79] The paradox of transformation will continue until a problem is defined to guide transformation.

Results of All This Change

Positive results can be found from all the focus on technological concepts and major combat operations prior to the 2005 NDS. All operations are now assumed to be "joint" in nature. Considerable advances have been made in command and control architecture through enhanced information infrastructure. The adaptive, iterative planning process has brought operational plans a new level of relevancy. The stunning success of the conventional phase of Operation Iraqi Freedom (OIF) was at least partially the result of these factors.

Negative results can be found in the US inability to provide stability following OIF. While "joint" is assumed in war, it does not extend to the Pentagon. Continued focus on technological change and major combat operations detracts from transforming business practices, primarily the acquisition and resource allocation processes.

Institutional momentum toward major combat operations persists today, regardless of the efforts by the Bush administration to force it otherwise. Services and Congressional leaders depend upon the "big ticket" items related to major combat operations to ensure they retain as much of the defense budget as possible.

The process for transformation thus far has not utilized proven, historical methods (see Table 4). Transformation has lacked focus in two areas: Identifying a problem to focus transformation and developing doctrine to remedy the problem.

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[79] Max Boot, "The Wrong Weapons for the Long War," *Los Angeles Times*, February 8, 2006.

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1997 QDR: Transformation = modernization
Technology ⇒ Equipment ⇒ Doctrine

2001 QDR: Intended parallel transformation of concepts, capabilities, and
organizations; however still focused on modernizing forces
Technology ⇒ Concepts

2003 TPG: Effects Based Operations enabled by Network-Centric
Warfare; rhetorical use of terms without substance
Concepts ⇒ Technology ⇒ Experimentation ⇒ Doctrine

2005 NDS: Transform to win the war on terror
Problem ⇒ Concepts ⇒ Capabilities ⇒ Experimentation
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Table 4: Chronology of Transformation

However, the primary driver for transformation has been Secretary Rumsfeld. The

Office of Force Transformation works directly for the Secretary, and as a policy structure

is ill equipped to define military problems requiring fundamental change. The civilian

leadership in OSD is not staffed to develop or author doctrine either. According to

Patrick Sweeney of the Naval War College the, "proliferation of concepts, with little

supporting doctrinal guidance, has created confusion as forces in the field apply these

new effects-based notions as best they can."[80] In the Starry model, the Secretary would

need to be an advocate for change, but not *the* advocate. Marketing from the SECDEF,

who has difficulty appearing as an insider, has little chance of success in an organization

as resistant to change "from above" as the military.

US Joint Forces Command (JFCOM) could be a logical proponent for change while

authority for transformation continues with the Secretary. JFCOM's responsibilities

include:

- Lead for concept development and experimentation

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[80] Patrick Sweeney, "Effects Based Confusion: The Missing Link with Operational Art," *Emerging Concepts Reading NWC 2073*, (Newport, Rhode Island: Naval War College, December 1, 2005).

- Lead joint force integrator
- Lead agent for joint force training
- Lead the collaborative development of readiness standards for joint headquarters staffs
- Primary joint force provider[81]

As such, its focus on concept development, experimentation, and training would be ideal after the formation of a problem and doctrine. However, the focus on concepts may detract from the ability to objectively assess problems and JFCOM's role in doctrine is only to recommend changes as the lead joint force integrator.

Identifying doctrinal requirements early in transformation is key to reducing the institutional momentum from the 1990s and countering the paradox of transformation. The 2005 NDS provides insight into a transformation approach nearing the ideal model used by Gen Starry. By utilizing General Starry's model, problems, doctrine, and capabilities are structured in an orderly process. The vision for transformation in *Elements of Defense Transformation* concludes with forces capable of, "…a smooth transition from Major Combat Operations (MCO) to Stability Operations."[82] Chapter 4 will show the conditions leading to this transition and the ensuing stability are the impetus for transforming the national security apparatus.

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[81] Office of the President of the United States, *Unified Command Plan*, (Washington D.C., March, 2005): 7-10.
[82] *Elements of Defense Transformation*, 8.

Chapter 4

Leading National Level Transformation

The first, the supreme, the most far-reaching act of judgment that the statesman and commander have to make is to establish . . . the kind of war on which they are embarking.

– Carl von Clausewitz, *On War*

The previous chapter built off the idea, proposed in Chapter 2, that the definition of transformation is inadequate and has led defense transformation toward modernization and evolution. A detailed discussion of the international security environment is required so the reader can determine the military role in that environment. If defense transformation is applied in the right context, then true security transformation at the national level can take place.

Globalization – the process of economic, cultural, and political integration[83] – and information technology define today's security environment and identify where and why the US must be prepared for the future. The NSS considers the gravest danger facing the US to be the "crossroads of radicalism and technology."[84] The NDS describes the two key dimensions of the 21st Century as globalization and proliferation of weapons of mass destruction.[85] Therefore, globalization and information technology define the intersection between the NSS and NDS as the nation looks to combat radicalism that uses

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[83] Stanley Hoffman, "Clash of Globalizations," *Foreign Affairs*, Vol. 81, No. 4, July/August 2002, 104.
[84] President George W. Bush, "President's Forward," *The National Security Strategy of the United States of America*, (Washington DC, September 2002).
[85] *National Defense Strategy*, 1.

potentially catastrophic means. By the end of this chapter, the reader should understand the leadership required to enable national level transformation.

The Flat World and Horizontal Integration

Thomas Friedman describes globalization as a process which has integrated nations, multinational corporations, and individuals over the last 500 years through three great eras of globalization. Globalization's first era was the search for natural resources and commerce by *nations* beginning with Columbus's voyage in 1492. [86] It culminated around 1800 and established the Westphalian concept of the nation-state as we know it today. Globalization's second era was characterized by multinational *corporations* searching for markets and labor during the industrial revolution.[87] Decreasing transportation costs led the first half of this era with

> Drivers of Globalization:
> 1492-1800: Nation-states
> 1800-2000: Multi-national corps.
> 2000-present: Individuals

steam engines and the railroad. Dramatic gains made during the twentieth century in communications, from the telegraph to satellite communications, led the second half of this era. This second era resulted in the maturation of global markets and economic systems.

The world is currently undergoing the third era of globalization, which is the final equalization of nations, multinational corporations, and individuals.[88] One main difference between this era and the previous two is the former were driven primarily by Europe and America whereas the latter is driven by a much more diverse population. The

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[86] Thomas Friedman, *The World is Flat: A Brief History of the Twenty-first Century*, (New York: Farrar, Straus, and Giroux, 2005): 9.
[87] Ibid.
[88] Ibid., 11.

literal fall of the Berlin Wall on 11/9/89 brought down many figurative walls around the world and set in motion the process of flattening the world.[89]

This new world was the stage where innovative technology provided the tools that interconnected individuals, markets, and systems. It was the means for the triple convergence in 2000 "of new players, on a new playing field, developing new processes and habits for horizontal collaboration."[90] The new players were the approximately three billion people in China, India, Russia, Eastern Europe, Latin America, and Central Asia. The new playing field was created when information technology became robust enough to support communication without regard for geography or distance. That technology was then the backbone for new ways of doing business using horizontal integration to connect those 3 billion people to the global marketplace. Future globalization will be driven by *individuals* who understand this flat world and are able to flexibly conduct operations in it without assistance from traditional forms of power such as treaties and international government organizations.[91]

The final result of this "flat world" is a leveling of all playing fields, creating equal opportunity, and equal danger, in all elements of national power and at all levels of society to influence world affairs. A key characteristic of this flat world is that small and large organizations are able to focus on their core expertise and divest operations that would otherwise detract from the core business. Small companies or even individuals (e.g. bin Laden) can subsequently influence world events, or threaten large numbers of people, without the resources of a nation-state (e.g. Hitler). [92]

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[89] Ibid., 49.
[90] Ibid., 181.
[91] Ibid., 183.
[92] Ibid., 443.

The US military's role in this flat world can be seen as the ultimate stability mechanism. When the combined elements of national power are unable to prevent conflict, the military must quickly resolve conventional operations and rapidly transition into security and stability operations. Only then can the nation return to this flat playing field. Strong conventional forces are a credible deterrent to prevent major war. In the event regime change is necessary, conventional conflict of some scale must be assumed. The stability mechanism required following regime change is critical in this view of the flat world.

Society is moving from hierarchical organizations centered on *command and control* to horizontal organizations based on *collaborate and connect*.[93] For example, the invention of the Blackberry allows the boss to be continually connected with his or her employees. The military equivalent is the collaborative information environment. In a perfect world, bosses and employees can now collaborate more freely and frequently than ever before, resulting in greater efficiencies and less friction. Personnel from different parts of the organization must now work collectively instead of in disparate stovepipes. This horizontal integration allows employees to make more decisions in today's environment. Naturally, a risk of this technology is leadership thinking they have enough information to make all decisions, leading to micro-management.

The intersection of globalization and information technology has created new forms of wealth.[94] "Idea-based goods," such as consulting and software, are easily marketed and sold electronically to the rest of the virtual world. As more consumers are connected by globalization, the market for these goods increases, and so does the value. The

[93] Ibid., 212.
[94] Ibid., 230.

opposite of idea-based goods are "physical-based goods," or raw materials such as lumber or steel. The value of physical goods is not increasing as quickly as idea-based goods, therefore nations connected to globalization only through factories, manual labor, and raw materials are only tenuously connected.

Friedman discusses four groups of people who are the true threats to global security in the future. The first are those who are "too sick" or live in hopeless governments.[95] They are characterized as those who live with pandemic diseases (HIV-AIDS, malaria, etc.) or have no steady electricity or potable water. The second group includes those who do not have the tools, skills, or infrastructure required to participate in globalization.[96] These two groups form the basis of failed states and ungoverned areas.

The third group includes those who are threatened, frustrated, or humiliated by the closeness inherent in globalization.[97] These groups use the trans-national media to blame others for their problems, live in cultures that discourage critical and original thinking, and possess a feeling that nothing can go right for them.[98] Osama bin Laden, al-Qaeda, and Islamic extremism come from this group.

The fourth group is the three billion "new players" in the global economy and the ever-greater amounts of energy required to continue improving their lifestyle.[99] Those advocating open energy markets must reconcile integration, efficiency, and environmental protection to promote energy security in the future.[100] One way to

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[95] Ibid., 376.
[96] Ibid., 382.
[97] Ibid., 392.
[98] Ibid., 400.
[99] Ibid., 408.
[100] Martha Harris, "Energy and Security," *Grave New World: Security Challenges in the 21st Century*, ed. Michael Brown, (Washington, D.C.: 2003): 158.

promote this security is to view the expansion of resource markets as a factor creating

interdependence as pipelines and power grids link more nations.[101]

   Much like those power grids, classical geopolitical threats and the risk of global

conflict are mitigated by what Friedman calls "The Dell theory of conflict prevention."

> No two countries that are both part of a global supply chain, like Dell's,
> will ever fight a war against each other as long as they are both part of the
> same global supply chain.[102]

Companies and nations come together in a just-in-time supply chain, which if disturbed

by a war or protracted political upheaval, would significantly degrade the investment and

progress in new additions to globalization.[103] Essentially, in the current era of

globalization, nations must understand what they lose if they go to war.

   Globalization and information technology have created a world where individuals

and nations both have the power to influence international events. Meanwhile, global

investment, supply chains, pipelines, and power grids have tied many nations together

creating a case where more than blood is risked in a military conflict. A strong military is

still required, but the other elements of national power become more important in order to

focus on peace rather than war as the nation assures, dissuades, and deters amongst these

intertwined arrangements.

The Information Age and Fourth-Generation Warfare

   The flatter world has also created a level playing field between international and

trans-national actors. As information technology makes the world smaller, intra-state

conflicts have greater regional significance that puts them on the international stage. The

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[101] Robert Manning, *The Asian Energy Factor: Myths and Dilemmas of Energy, Security, and the Pacific Future*, (New York: Council on Foreign Relations, 2000): 203.
[102] Friedman, 421.

flat world has led to wars of a political, networked, and protracted nature the US national security apparatus is not prepared to accommodate.

Thomas Hammes describes these wars as the perfection of *Fourth Generation Warfare* (4GW). Fourth generation warfare grew from Bill Lind, Gary Wilson, and their coauthors' 1989 article, "The Changing Face of War: Into the Fourth Generation," where new technology contributed to the evolution of warfare over the last few centuries.[104] The first generation of warfare was exemplified by the French Revolution and massing manpower at the point of main effort. The second generation culminated in World War I tactics of massing firepower. Further technological improvements made the third the generation of maneuver witnessed during World War II.

Hammes describes the fourth generation as Mao's concept that superior political will, over time, can defeat stronger military and economic forces.[105] Hammes is critical of DoD transformation efforts as purely focused on technological improvements aimed at third

> Fourth Generation Warfare: Political will, over time, can defeat stronger military and economic forces.

generation, large state-on-state war, while at the same time Mao's concept of warfare has evolved to the point of the networked foe we face today in Al-Qaeda and its various splinter groups.[106] He specifically critiques the TPG for guiding the Services to defeat an enemy bearing no resemblance to the ones we are fighting today.[107] In a related article,

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[103] Ibid.
[104] William Lind and others, 'The Changing Face of War: Into the Fourth Generation," *Marine Corps Gazette*, October 1989, 22-26.
[105] Thomas Hammes, *The Sling and the Stone: On War in the 21st Century*, (St. Paul: Zenith Press, 2004): 207.
[106] Ibid., 7.
[107] Ibid., 9.

Hammes notes 4GW is the only war the US has lost and has lost it three times in

Vietnam, Lebanon, and Somalia.[108]

> To better understand 4GW, one can look at Dr. Steven Metz's concept of "small

wars" as the past, present, and future of warfare. Metz describes small wars as

> armed struggles that occur when a highly motivated non-state actor or
> coalition of non-state actors cannot attain its/their political objectives
> through peaceful means, but also is too weak to seek them through
> conventional military activity.[109]

These wars are cross-cultural wars, pitting a state against non-state actors ranging from

bands of terrorists to quasi-state insurgent movements where the non-state combatants are

"less constrained, whether out of desperation or simply because they do not accept the

legitimacy of the rule sets."[110] Small wars are laden with ambiguity and asymmetric

methods, organizations, and ethics. This ambiguity and asymmetry make small wars

"quintessentially political and psychological."[111]

> Fourth generation warfare is political, networked, and protracted. First, the political

message in 4GW is key and transnational media is the primary weapon to pull an

adversary into conflict and then to overwhelm its political decision makers.[112] A 4GW

adversary's main goal is to convince the enemy's decision makers their strategic goals

are unachievable or too costly. The enemy does not have to win, just fight until the

coalition or nations involved capitulate and leave.[113]

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[108] Thomas Hammes, "The Future of Warfare," *Re-thinking the Principles of War*, ed. Anthony McIvor, (Annapolis: Naval Institute Press, 2005), 270.
[109] Steven Metz, "Small Wars: From Low Intensity Conflict to Irregular Challenges," *Rethinking the Principles of War*, ed. Anthony D. McIvor, (Annapolis: Naval Institute Press, 2005), 289.
[110] Ibid., 279.
[111] Ibid., 288.
[112] Hammes, *The Sling and the Stone*, 207-210.
[113] Ibid., 183.

Second, transnational, national, and sub-national networks enable 4GW opponents to merge their objectives and message. They use all political, economic, social, and military networks to convey the message.[114] Networks are based on convenience and change during conflict to meet their needs. This flexibility and adaptability is much easier for transnational groups than for a nation-state.

Third, the US has poorly dealt with the protracted nature and patience exhibited by 4GW focus on strategic objectives, not tactical battles.[115] Casualties were predominantly civilians harmed not by military weapons but by common materials in everyday society. This relieved the enemy of the logistics "tail" involved with moving mass amounts of military hardware and allowed him to focus on offense since there was no infrastructure to defend.[116]

The ability to make decisions across the levels of war is a critical difference in information age verses industrial age warfare. The internet allows today's terrorists to access and share information and then make decisions at the speed of light.[117] The opponent uses his networks to decrease the distance between the lowest and highest levels of an organization and allows both levels to make critical decisions. On the other hand, the US is still an industrial age, hierarchical organization that maintains a rigid flow of information and top-down decision-making.[118] Technology allows senior commanders to make quicker decisions but they continue to use the same outdated system to make those decisions.

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[114] Ibid., 208-210.
[115] Ibid., 221.
[116] Ibid., 209.
[117] Ibid., 196.
[118] Ibid.

The overwhelming majority of armed conflict since the fall of the Berlin Wall has been intra-state conflicts with either local or regional significance that have garnered international attention.[119] These intra-state conflicts resulted in inadequate international responses in countries such as Bosnia and Somalia. The US government and population must be able to better deal with these political, networked, and protracted wars of today and the future.

Fourth Generation Warfare continues to define problems requiring transformation beyond the military imperative – particularly as one combines "uncertainty" from the NDS with the ultimate stability mechanism suggested by analysis of Friedman. In 4GW, the military must build the capability and capacity to provide political reconstruction, public order, border control, and resolve humanitarian issues. The military's role in 4GW is as a *supporting partner* in an interagency effort toward defeating the political will of a 4GW adversary.

Disconnectedness and Security

Friedman showed information technology has accelerated globalization, empowered individuals, and moved stability to the forefront of the global stage. Hammes described what those individuals do with that empowerment and how they employ political, networked, and protracted warfare. Thomas Barnett combines the two ideas with the idea that information technology is the connective tissue of globalization and society with the need for the US to focus efforts of all elements of national power toward linking nations to globalization. Barnett defines globalization as "a process, a pathway, a *what* combined

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[119] Michael Brown, ed., *Grave New World*, (Washington DC: Georgetown University Press, 2003), 3.

with *where*."[120] The Cold War peace dividend is the idea that globalization, combined with nuclear weapons, has killed the idea of "all-out" conventional conflicts between major states resulting in total defeat of one or the other.[121]

The international security environment is defined by where globalization has taken root and where it has not.[122] Barnett has mapped the world into those connected to globalization (the "functioning core" or core) and those outside of globalization (the "non-integrating gap" or gap). The gap is constructed around the clusters of US military operations since the first Gulf War.[123] Those connected to the core are mutually dependant upon one another, and their overall security rises and falls in tandem.[124] The boundary of the non-integrating gap is identified by the dark blue in Figure 2.

Figure 2: Barnett's Core and Gap

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[120] Thomas Barnett, *The Pentagon's New Map: War and Peace in the Twenty-First Century*, (New York: Berkley Books, 2004), 121.
[121] Ibid., 32.
[122] Ibid., 121.
[123] Ibid., 146.
[124] Ibid., 239.

The rules or "rule sets" in the core are key to the stability required to move more gap states into the core.[125] Rules create a system of enforcement; clear rules become so because nations understand abiding by the rules is the best way to advance in the world. Fewer rules or misaligned rule sets across social sectors mean less security and more war. Security is defined by four intertwined global flows: people (migrations), energy (primarily oil and natural gas), foreign direct investment, and the "export" of security to regional "markets."[126] If any of these global flows is restricted, a nation cannot be connected to the core.

There are two groups of states critical to the advance of globalization and connectedness: the "seam states" and the "new core." The seam states are where transnational actors access the core and include Mexico, Brazil, South Africa, Morocco, Algeria, Greece, Turkey, Pakistan, Thailand, Malaysia, the Philippines, and Malaysia.[127] Increasing security and telecommunications capability in these states is required to maintain the core as the US works to connect more of the gap to globalization. The new core states include Russia, India, China, South Korea, South Africa, Brazil, Chile, Argentina, and Mexico.[128] Security in these states is reasonable, however problems with disease and investment environments may prevent their complete inclusion into the core.

While Barnett professes large-scale conventional warfare is a thing of the past, he does interject a bit of reality and acknowledges the nation must still be prepared for conventional war. To do this, Barnett recommends a "leviathan" force to concentrate on

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[125] Ibid., 23.
[126] Ibid., 198.
[127] Ibid., 188.
[128] Ibid., 374.

warfighting and a "sys-admin" force oriented around peacekeeping.[129] This distinction will allow the US to maintain globalization's continued advance while periodically waging war in the Gap as the "de facto Leviathan."[130]

According to Barnett, 9/11 provided the strategic environment transformation required to elevate military operations other than war to the top levels of US military thinking. However, military power cannot singularly destroy those who wish to fight global connectivity and the freedom inherent in it.[131] To this end, "interagency" cooperation has superceded "jointness" as the key challenge for national security in coming years. Military transformation efforts, as well as those agencies cooperating in the war on terror must focus on war in context of "everything else." This cooperation will result in diplomacy replacing the military as the guiding force in US decision making in the future.[132]

Conventional forces' role in this view of globalization is to uphold the "rule sets" and maintain the security of global flows. This security is a significant part of assuring allies and dissuading conflict in the core. Occasional war in the gap is necessary to ensure global stability and will require conventional forces to administer the immediate security required to prevent an intra-state conflict from destabilizing the core. As one examines the military role in the world today, the stability mechanism required after conventional battle makes the bifurcation of the military a deficient approach to transformation. If diplomacy is to supercede military force in the war on terror, security transformation is a national level requirement not limited to the Department of Defense.

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[129] Ibid., 370.
[130] Ibid., 369.
[131] Ibid., 372.
[132] Ibid., 43.

Appreciating the International Security Environment

Globalization and information technology have created an environment where the key to international security is improving the quality of life in what was once the third world to the point where they can become functioning participants in the world today. Nations and groups that remain outside the core or do not enjoy the benefits of the flat world, whether from disease, frustration, investment, or energy, are fueling the 4GW the US is entrenched in today. There are two characteristics shared by Friedman's "new players" and Barnett's "new core" pertinent to this discussion: First, their stability is critical to the security of the international environment. Second, the US is not engaged in military conflict with any of these nations. To increase their character in world affairs will require diplomatic, economic, and information efforts.

Empowering interagency partners is critical to appreciate the international security environment. An individual no longer requires the resources of a nation-state to threaten international security. Friedman, Hammes, and Barnett clearly articulate the need to approach security using all elements of national power. The military cannot accomplish that security alone, yet interagency partners are not resourced to provide the amount of effort required.

Securing the flows of people, resources, and investment to Barnett's seam states is critical to protect globalization and prevent the spread of 4GW. The US must concentrate the diplomatic, information, and economic elements of national power in these seam states so the military can concentrate efforts on exporting security into the disconnected, ungoverned spaces and failed states. Conditions in these areas may require military

forces but not necessarily the application of military power. The difference lies in the concept of focusing on peace and exporting hope instead of fear.[133]

The US needs to change its paradigm for future operations. Industrial age government operated within a hierarchical framework of international institutions, agreements, and conflict. Information traveled between leaders and security was based on physical goods and the nation's ability to protect its physical borders. Companies performed all aspects of their business from end to end. Those companies now focus on their core expertise to succeed. Idea based goods are transportable to an infinite number of customers with the push of a button in the information age. Less work is accomplished between nations as information flows *across* state boundaries. Trans-national terror, trans-national crime, and trans-national media frame the information age paradigm. As the paradigm changes, the military must continue to focus on core competencies to enable the remainder of the US political apparatus.

Transforming to Win the War on Terror

Lou Gerstner, credited with transforming IBM in the early 1990s, once told students at Harvard Business School, "Transformation of an enterprise begins with a sense of crisis or urgency…No institution will go through fundamental change unless it believes it is in deep trouble."[134] The crisis in defense transformation lies in a military culture unable to accommodate the rapid changes in the international security environment today. Globalization and information technology are at the root of the crisis.

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[133] Friedman, 450.
[134] Martha Lagace, "Lou Gerstner Discusses Changing the Culture at IBM," *Harvard Business Week*, (December 9, 2002): accessed at http://hbswk.hbs.edu/item.jhtml?id=3209&t=finance&noseek=one on December 20, 2005.

The combination of globalization and information technology has created an international security environment requiring greater effort toward the political and psychological dimensions warfare.[135] The US must capitalize on the effects of global supply chains and power grids as it balances the ratio of traditional diplomacy with coercive diplomacy in the fight for the hearts and minds of the world. Assure, dissuade, and deter have as much to do with diplomacy as they do with military strength.

A capabilities based approach to transformation should really look at the security environment through two lenses: Conventional war and everything else. Trans-national actors adapt faster than DoD can move its bureaucratic culture. The key to winning "everything else" will be integrating diplomatic, economic, and information efforts to ensure relative peace within the new core and the military providing security to the sanctuaries. Integrating those efforts will be decisive in the war against adversarial trans-national actors.

When one looks at US military operations since 11/9/89 – Iraq, Somalia, Bosnia, Haiti, Kosovo, Haiti, Afghanistan, and Iraq – a pattern of enduring stability operations, conducted by the military, emerges. If a new operation begins approximately every two to three years and lasts five years or more, the US military can expect to be routinely engaged in stability operations in two to three separate locations for the foreseeable future. This limited assessment does not count the myriad of similar operations conducted by other nations or the humanitarian missions conducted by the US military either.

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[135] Christopher Ross, "Pillars of Public Diplomacy," *Harvard International Review*, Volume 25, China, (Summer 2003): Accessed at http://hir.harvard.edu/articles/?id=1117 on November 10, 2005.

To assess needs for the future security environment, one must start with the possible range of military operations: Essentially from major, state-on-state war in the Cold War sense to humanitarian operations. Military transformation must provide a credible strategic deterrent, a capable force with the flexibility to transition rapidly from conventional to stability operations, and the ability to provide basic nation building skills until more appropriate agencies become available.

While the likelihood of major, state-on-state war has diminished, the need for a conventional response in a nation either sponsoring or harboring extremism may become the worst-case scenario for the war on terror. In this case, to transform to win the war on terror will require a quick, conventional win followed by extended stability operations until the nation building effort can be transitioned to a civilian-led operation.

An integrated effort using all elements of national power is critical in securing US strategic interests.[136] Other Departments must be available, sourced, and integrated to participate in stability and nation-building efforts as quickly as security can be provided. This cannot happen while the Services argue over every dollar in the budget. To reduce this tension, DoD and the Services need to focus on core competencies. Core competencies cannot be defined until the crisis between the military culture and the changing international security environment is acknowledged and addressed.

This chapter has suggested many roles expected of the military for the nation to succeed into the international security environment: The ultimate stability mechanism, supporting partner in the interagency, and conventional forces capable of immediately transitioning to stability operations. These roles do little, however, toward describing

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[136] President George W. Bush, "President's Forward," *The National Security Strategy of the United States of America*, (September 2002).

what is actually required as one looks at the international security environment. National level transformation is required, interagency interdependence is key to that transformation, and there is currently no leadership designated in that effort.

Therefore, the nation needs DoD to lead national level transformation. This will require an enlightened DoD to provide more for the interagency *before* a crisis so they can provide more *during*. Other Departments and government agencies are critical for the US to be successful in a world where individuals have the capacity to influence nations. The political, networked, and protracted nature of what is tying down national assets magnifies the fact that the military can no longer plan, prepare, or execute in a vacuum. Force is not always required to connect the gap to globalization and the information age. The way ahead to the President's "integrated effort" lies in DoD's ability to become the nation's *Vanguard of Transformation*.

Chapter 5

The Way Ahead for Defense Transformation

If the security environment were to change dramatically and threats of large-scale aggression were to grow or diminish significantly, it would be both prudent and appropriate for the US to review and reappraise its warfighting requirements.

– 1997 Quadrennial Defense Review, pp. 13

Overall, the current TPG transformation definition is so general it does not focus efforts toward any goal. It mentions a process, but there is no process to guide transformation. A process is required to incorporate vision in transformation. The proposed definition in Chapter 2 is a guide for the new process:

> Transformation is the continual process of developing doctrinal solutions to correct current or anticipated military deficiencies, resulting in fundamental changes to concepts, capabilities, people, or organizations, and a Defense Department better able to meet US national security objectives.

A fundamental change in the way DoD approaches transformation is required to ensure an effort beyond modernization or evolution. This change will require OSD to admit its efforts thus far have not succeeded.

General Starry's successful model to ensure strategy drives technology has not been utilized. Military efforts of the 1990s resulted in institutional momentum toward large-scale conflict and disregarded post Cold War changes in the international security environment. The balance between concepts, capabilities, and technology has been

uneven and a focus for transformational efforts has been missing. This imbalance has grown due to the impacts of information technology on globalization in the 21 st Century.

To date, transformation efforts have been conducted without direction, orchestrated from the wrong organization, and have lacked vision. Ultimately, a new transformation definition drives three things: a new transformation process, a new transformation organization, and a new vision.

The Transformation Process

A new process will facilitate transformational change within DoD (see Figure 3). The primary function of this process is to organize the concepts, capabilities, and organizations professed by the various documents directing transformation. The process will ensure transformation is more than modernization or evolution. Without a process to guide fundamental changes, "hope" becomes the strategy for transformation.

As a strategy for transformation, this process puts the ends-ways-means back in order. Change begins with the ends in mind. Doctrine describes the way a transformation will be incorporated. Concepts, capabilities, and technology are therefore the means for carrying out the transformation.

Identify the Problem

Identifying the problem is key to this process. The problem is what provides the *impetus for change*, otherwise the organization transforms haphazardly with no overall direction. As with current transformation efforts, lack of focus results in significant effort with disproportionately less resultant change. Transformation without focus
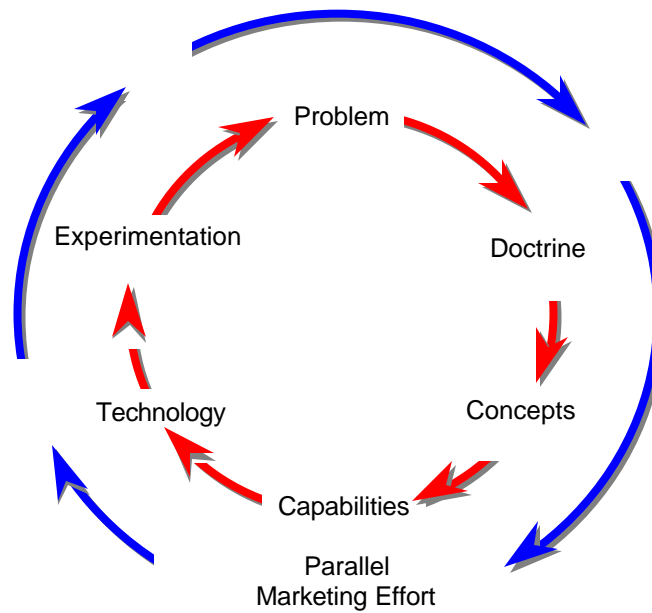
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                    Problem
      Experimentation          Doctrine


      Technology               Concepts


               Capabilities

                 Parallel
              Marketing Effort
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Figure 3: The Transformation Process

can be seen as a shotgun approach to transformation: You will probably hit something, but it will take considerably more effort and the end result will not be as clean as originally desired.

One cannot expect to transform the entire military establishment based solely on one problem. Simply "transforming to win the war on terror" is too broad a problem for transformation. However, once operationalized or defined it could lead to a family of transformative efforts such as the ability to immediately transition from conventional to stability operations, provide political reconstruction, or ensure border control. The summation of these efforts would lead to fundamental change – not just in military

forces, but also in interagency efforts. Each Service could then utilize the separate, distinct problems, within the transformation process, to develop their own doctrinal solutions.

Develop Doctrine to Meet the Need

Developing doctrine ahead of concepts is also very important. "A joint, network-centric force capable of executing effects-based operations enabled by network-centric warfare,"[137] is not an operational doctrine. It is, however, a concept that may be useful in conducting operations under the framework of a new doctrine, designed to solve a defined problem. Doctrine also provides a coherent argument for the necessary marketing, which must occur throughout the transformation process for the change to be accepted by those required to use it.

The main purpose for writing doctrine before concepts is to reduce or eliminate the confusion created when organizations begin to employ new ideas. A common "language" is required among the joint force to ensure all participants understand the terms used. If a concept is treated as doctrine before it is accepted by those who will literally live and die by it, it has a great chance for being misunderstood, misapplied, and ignored.

Concepts, Capabilities, Technology, and Experimentation

The circular nature of Figure 3 is not intended to show a process forced to move in series from step to step. Rather, it is to illustrate a process with no definite end state. Doctrinal solutions to one problem may lead to required transformation in other areas.

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[137] *Elements of Defense Transformation*, 8.

Once a problem is identified and a doctrinal solution created, concepts can now be defined in light of the new doctrine to provide a suitable context for change. Capabilities can drive technology or the capabilities and technology can be created together, in parallel, to enable the new doctrine. Modifications should be made as deficiencies in the doctrine are discovered throughout the experimentation of capabilities and technology.

Standing Joint Force Headquarters: An Example

Utilizing the SJFHQ example from chapter 2, this transformation process could be demonstrated as follows:

Problem: Current alignment of staff elements in joint headquarters does not provide an environment conducive to horizontal integration of planning and execution efforts. The traditional J-code structure isolates personnel from each directorate for day-to-day operations and requires the formation of ad hoc joint planning groups or operational planning teams for operational planning and execution. A new organizational structure becomes the solution to a defined problem. This organization is used to anchor transformation, not the technology.

Doctrine: Re-write doctrine to define new staff functions, aligned to take advantage of enabling concepts and capitalize on horizontal integration as personnel with different specialties and experience are amalgamated into working groups focused on integrating that expertise at all levels. Doctrine becomes the means to provide a common language to the solution and to market and gain buy-in from the commanders who will incorporate it.

Concepts – Technology: The current SJFHQ model incorporates members of the different directorates into a matrix-style organization to capitalize on integrating their

expertise and knowledge into more holistic groups that plans and executes more efficiently.[138] Utilizing that model, take personnel from each directorate in the current structure and permanently form cross-cultural teams as directorates instead of vertically aligned stovepipes. Instead of modernizing with enabling capabilities and evolving through the ripple effect of those capabilities, the staff will be transformed, relieving the need for an additional SJFHQ.

Experimentation: Now, instead of the SJFHQ becoming an additional staff element, it becomes the proof of concept vehicle utilized to change the culture that will inevitably resist this change. By rewriting the doctrine up front, as new technology and capabilities are introduced to improve planning and execution, doctrine will not require further change to incorporate them.

Transformation Beyond Operations

Transformation of business practices, distinct from force transformation, is also critical to overall defense transformation and brings its own discrete problems to transformation. Even though a "doctrine" for the acquisition process (as one example) does not exist, there are procedures and laws that may require fundamental change in order to meet the DoD's future needs. In this example, a new procedure would substitute for the doctrinal change in an operational example. Required changes to the law would come from the capabilities, technology, and experimentation examined prior to implementation.

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[138] Joint Warfighting Center, *Joint Doctrine Series Pamphlet 3,* 8.

A New Transformation Organization

Separate organizations are required to ensure force transformation and business transformation receive adequate levels of effort and expertise. To that end, management of force transformation should be removed from OSD, placed at JFCOM, and replaced at OSD with the Office of Transformation Integration.

Move The Office of Force Transformation out of the Pentagon

The most important step in creating separate organizations is to move the Office of Force Transformation from OSD to Joint Forces Command (JFCOM). OSD is one of many organizations capable of articulating problems requiring doctrinal change, but it is not the appropriate office to author new doctrine. The Secretary of Defense is ultimately responsible for *oversight* of the process, but OSD should not be the office centrally responsible for *managing* force transformation.

JFCOM is already the lead for concept development and experimentation, lead joint force integrator, and the lead agent for joint force training. These are all critical aspects of generating successful transformation in a rapidly changing global security environment. The relationship between concept development, capabilities, technology, and experimentation becomes closer and more focused if the transformation process is placed under the direction of one commander.

Force transformation and doctrine are closely related in this transformation process. To provide the commander oversight of the entire process, responsibility for joint doctrine would also need to be placed at JFCOM. JFCOM has insight in new concepts. Placing responsibility for doctrine at JFCOM capitalizes on that expertise as the process is conducted for each problem. The Commander is required to coordinate with the

Secretary through the Chairman, therefore little is lost by removing doctrine stewardship from the Joint Staff. The Deployable Joint Training Team and Joint Center for Operational Analysis are excellent links between doctrine writers and operators in the field as lessons are learned in the rapidly changing environment the military finds itself today. The National Defense University, through the Joint Forces Staff College (collocated with JFCOM), provides an avenue to utilize academic experts in policy, military history, strategy, and other related topics, who can also be leveraged as new doctrine is written. As transformation manager, the JFCOM commander (CDRUSJFCOM) would then own the entire process for force transformation.

CDRUSJFCOM is a general officer who can be an advocate for new changes without being too close to the top. He would have to carefully utilize the contractors in JFCOM – just as civilians in OSD should not be writing doctrine, neither should civilian contractors. His relationship as a combatant commander with the Secretary and Chairman provides the structure to ensure upward sponsorship. That same position also provides a springboard from which to promote new doctrine, concepts, and capabilities through his various component commands.

Establish the Office of Transformation Integration

The Office of Transformation Integration should replace the Office of Force Transformation in OSD. The Office of Transformation Integration (OTI) would have two roles in defense transformation: First, it would be responsible for applying the transformation process to the business practices requiring transformation. Second, it would be the office responsible for integrating DoD transformation with the remainder of the national security apparatus.

Business transformation is largely an afterthought in the current transformation debate and requires expertise separate from force transformation. Just as OSD should not be authoring doctrine, JFCOM should not be managing the complex problem of changing rules in civilian bureaucracy and the corresponding laws that go with them – forcing the requirement for two offices. In this capacity, OTI focuses inward on the many business practices controlled within the Pentagon such as acquisition, research and development, and programming.

The Office of Transformation Integration will enable DoD to set the standard for, and then lead, national level transformation. OTI will be a critical enabler of national security transformation as the President demands greater integration of all elements of national power. In this regard, OTI will focus its efforts outwards, looking to create synergy amongst DoD's interagency partners.

The most difficult task in bifurcating transformation will be for OSD to relinquish its previous duties managing force transformation. However, providing a uniformed military member to manage force transformation and a civilian to manage business transformation will alleviate potential friction between the processes. Synergy in the overall transformation effort will be created as the two offices provide focus to their respective processes. Bifurcating transformation into force and business transformation provides focus to both efforts. Separating the two offices geographically relieves potential conflicts as they manage their respective processes.

The Vision of Defense Transformation

"Joint" alone is insufficient in today's international security environment. True vision lies in the culture change required for the above processes to take hold – vision to

create an enlightened DoD that provides more to the interagency before crises instead of accommodating their shortfalls after. According to Dr. Metz, "Military transformation has, thus far, led to a force designed as a sprinter rather than a marathoner."[139] Focused vision must bring about the realization that no conflict can be dismissed quickly. It must then transform the armed forces to integrate across the range of military operations in conjunction with interagency and international partners.

Four steps are provided here to guide the vision of defense transformation and ensure a legacy of transformation as part of the defense culture: Acknowledge the crisis in the US military view of the international security environment, focus on Service core expertise, "joint" as a concept beyond operations, and the assets other Departments require to allow DoD to move toward a supporting role in the future. OFT and OTI will manage the separate transformation processes – vision will provide the Secretary the ability to lead them.

Acknowledge a Crisis Exists

Acknowledging the discontinuity between the US military's institutional momentum and the reality of the international security environment is key to correctly identifying the overarching issue for transformation. The international security environment and our adversaries have adapted to globalization and information technology faster than DoD. Globalization has created interdependencies between nations that require new methods of interaction. Information technology has changed the way wealth is created, protected, and distributed. Mao's concept of warfare has capitalized on the intersection of globalization and information technology to create a crisis in the US military outlook on

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[139] Metz, 293.

the world – the enemy has already transformed. One could argue this is a crisis beyond the military's span of control. However, if the military is to become the standard bearer for transformation, it must begin here.

The 1990's vision of a conventional force able to handle all facets of warfare has not come to fruition. Unfortunately, technological need was used as the catalyst during early transformation efforts. This institutional momentum toward a military designed around major combat operations and technological solutions has not been broken by Bush administration efforts.

The crisis facing DoD is that the world and our adversaries are changing faster than military culture can accommodate. The future security environment requires a military that deters major, state-on-state military conflict, swiftly defeats the most capable nations in the "Gap" when required, and then immediately provides requisite security for follow on efforts. The military must build the capability and capacity to provide political reconstruction, public order, border control, and resolve humanitarian issues in order to fulfill its role, even when conventional operations are not required.

Determine Service Core Expertise.

The 2001 QDR called for DoD to focus on core warfighting competencies. However, this focus must begin with the Services in order to meet the challenge presented by the fiscal reality of today. A goal of transformation must be the ability to eliminate redundancy and waste without also diminishing resilience. As each Service determines its true core expertise and what can subsequently be divested to a sister Service, Senator Sam Nunn's statement on the Senate floor, July 2, 1992, "We're the

only military in the world with four air forces,"[140] may finally garner more than a rhetorical answer from the Services trying to protect their share of the budget.

Globalization and information technology have allowed businesses to focus on core competencies while others perform the remaining tasks that are no less critical but would detract from that core. Each Service must determine their core competencies and divest the remainder. This would subsequently provide more focus in research and development, force development, and transformation efforts. If a Service is required to depend upon another to perform a critical task, joint integration will grow to new levels. A focus on core expertise does not mean there would be no overlap, just that redundancy is eliminated to the greatest extent possible and an adjudication process other than what is used today is created to determine *required* overlaps.

For example, the intelligence, surveillance, and reconnaissance (ISR) programs in each *Transformation Roadmap* have significant overlap and redundancy.[141] All three Roadmaps contain unmanned aerial vehicle weapon system development; all describe their individual space programs; and the Distributed Common Ground System is described in the *Navy Transformation Roadmap* as a "family of systems that *each Service is developing* to provide networked ISR support" (emphasis added).

Elevate Jointness Above "Joint Operations"

One reason each Service retains control over such similar programs is the lack of "jointness" *off* the battlefield. For instance, when one compares operations in Desert Storm against those in Iraqi Freedom it is apparent the Services have embraced joint

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[140] *Do We Need Four Military Forces?* Video Transcript produced January 10, 1993 by America's Defense Monitor. Accessed August 17, 2005 at www.edi.org/adm/617/

operations. However, business practices in the Pentagon do not embrace an equivalent level of interoperability. Interdependence in planning, programming, research and development, acquisitions, and experimentation is critical to continue transforming within a fiscally constrained federal budget.

Technology and acquisition are inexorably tied, and creating interdependence in these arenas is critical to breaking barriers in the Pentagon in the same way they have been diminished on the battlefield. For example, the Army and Air Force were recently encouraged by OSD to work together on their Future Cargo Aircraft and Light Cargo Aircraft programs.[142] The two programs were stovepiped within each Service and little effort was being made between them to coordinate or combine efforts. In February 2006, the Air Force was still considering conducting its own Analysis of Alternatives even though the Army – the Service with the core requirement for such a capability – had already completed one. Transformation of Service research and development and acquisitions must bring down the stovepipes holding them apart.

Adjust Resource Allocation Within the Executive Department

Greater cooperation with the interagency cannot be attained until the Services are able to elevate the concept of "joint" above operations. Once the Services depend upon each other's inputs they will be able to fully recognize the importance of the interagency and its lack of resources. Other Executive Departments will be expected to handle a greater share of the war on terror as it moves away from military operations. The reality, though, is those Departments are not resourced adequately to perform that share. As the

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[141] See Chapter 5 in the *Army Transformation Roadmap*, July 2004; Chapter III.D. in the *Navy Transformation Roadmap*, 2003; and Appendix B in the Air Force *Transformation Flight Plan*, 2004.

interagency and non-military elements of national power increase in importance, allocation of Executive Department resources will become more critical.

Assure, dissuade, and deter have as much to do with diplomacy as military might, and the State Department is woefully lacking in resources. Budget differences are well known between the two Departments but the difference in manning has a more immediate impact on planning to win the war on terror: the Army alone has 8,000 planner billets while State has 6,000 *total foreign service officers*.[143] The ability of State and other government agencies to participate in the war on terror will be limited as long as such disparities exist.

Saying Defense must utilize, incorporate, and work with the interagency is not a new idea. The new part in this step is acknowledging that cannot happen without considerable change in the military outlook and resourcing. When the Services focus on core expertise and jointness beyond operations, Service budgets are no longer relative. If DoD expects others to do more in a resource constrained world it needs to find room in the defense budget to provide resources for other agencies and use what it gets more wisely.

All agencies are expected to do more in the war on terror. Many feel the Department is overburdened and performing tasks meant for other agencies. However, the only way to relieve Defense of this burden is to reallocate resources within a constrained budget.

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[142] John T. Bennett, "Air Chief: Multiple Aircraft Option Still Alive," *Inside the Air Force*, February 7, 2006.
[143] Barbara Stephenon, Director of Planning, Office of the Coordinator for Reconstruction and Stability, US Department of State, presentation to the Joint Forces Staff College, February 1, 2006.

This cannot happen within defense without focused vision in transformation demonstrated by a defined process and bifurcated transformation organizations.

Chapter 6

**Conclusion: Defense as the Vanguard of
National Security Transformation**

*Victory always smiled on one who was able to renew traditional forms of
warfare, and not on the one who hopelessly tied himself to those forms.*
                                                                    – General Giulio Douhet

An organized process puts force transformation and its related concepts back into a context where they can be openly discussed without generating emotional confrontations about what military members "think" they mean. It is counter-productive to think there is no place in operational art for effects based operations. This will lead to a stagnation of ideas and lack of progress at a time when society and technology are fundamentally changing the fabric of the socio-economic world in which we live. Getting the doctrine-concept cycle back in order will alleviate much of this negative attitude within DoD. The military can avoid concepts becoming confused with doctrine.

The transformation definition provided in this paper provides three critical components to the transformation process. First, it directs a continual process that allows focused changes to occur concurrently to meet defined capability gaps or requirements. Second, the definition provides an orderly flow as solutions are created to solve deficiencies. Finally, it focuses the process on change that is truly transformational. The impetus for *fundamental change* is vital to ensure there is a difference between modernization or evolution and transformation.

Current transformation efforts were derived from the institutional momentum of a

decade of misanalyzing the security environment and faulty force structure assumptions.

The Clinton administration realized it would be senseless for future competitors to stand

up to US military might in a conventional battle, but no substantial changes were made to

compete as a nation any other way. While the Bush administration's "assure, dissuade,

deter, defeat" strategy has the ability to better fit into an interagency and multinational

framework, actions show it is not leading the US military there. The paradox of

transformation will be broken when an Office of Force Transformation, focused

exclusively on well-defined force structure deficiencies, is able to define the impetus for

change required to dissociate uncertainty and US preeminence in conventional

operations.

It is essential that national security transformation begin by changing the paradigm

regarding how the US views security in the world today. In doing this, the military will

fill many sub-roles for the nation to accomplish future security objectives: ultimate

stability mechanism, supporting partner in the interagency, and conventional forces

capable of immediately transitioning to stability operations. These roles do little,

however, toward describing what is required once the nation admits security is not

formed solely around military capabilities. Only then can Defense accept its role as

vanguard for national security transformation.

The proposed Office of Transformation Integration provides the impulsion for

Defense to become this vanguard. The first step, though, of this office is to transform

defense business practices and create an enlightened DoD that provides more for the

interagency *before* crisis so they can provide more *during*. As the new office gains

momentum toward transforming the business of Defense it will naturally integrate these endeavors within the greater interagency effort.

Developing effective interagency integration and national level transformation will be neither simple nor easy. If DoD expects others to do more in a resource-constrained world, tough decisions are required regarding Service roles and missions. Defense will eventually need to find room in the budget to provide resources to other agencies.

The military cannot continue to be the "go to" resource in every contingency. The Department of Defense has the opportunity to become the standard-bearer for conducting transformation across the US government. Coordinating non-military transformation efforts is not a DoD function, but as standard-bearer it can lead from the front. The true means of incorporating vision in this process is moving from joint operations to a military culture so focused on core capabilities that waste is virtually eliminated, jointness is assumed at all levels, and the interagency is seen as an equal partner. Resources can then be allocated appropriately to allow the interagency to meet DoD expectations in the war on terror. An enlightened DoD will lead to a fundamental change in the way the nation employs all elements of national power.

Bibliography

The American Heritage Dictionary of the English Language, Fourth Edition. Houghton Mifflin Company, 2000. Accessed at http://dictionary.reference.com/search?q=transformation on December 26, 2005.

The American Heritage Dictionary of the English Language: Fourth Edition. Houghton Mifflin Company, 2000. Accessed at http://dictionary.reference.com/search?q=vision on January 4, 2006.

Barnett, Thomas. *The Pentagon's New Map: War and Peace in the Twenty-First Century*. New York: Berkley Books, 2004.

_____. *Transcript of "Esquire" Interview with Secretary of Defense Donald Rumsfeld*. Conducted April 21, 2005. Accessed at www.thmaspmbarnett.com/weblog/archives2/002370.html on December 8, 2005.

Belasco, James. *Teaching the Elephant to Dance: The Manager's Guide to Empowering Change.* New York: Plume, 1990.

Bennett, John T. "Air Chief: Multiple Aircraft Option Still Alive," *Inside the Air Force*, February 7, 2006.

Brown, Michael, ed. *Grave New World*. Washington D.C.: Georgetown University Press, 2003.

Bush, President George W. "President's Forward." *The National Security Strategy of the United States of America*. Washington D.C.: September, 2002.

_____. "President's Message to Congress." *A Blueprint for New Beginnings: A Responsible Budget for America's Priorities*. Washington, D.C.: US Government Printing Office, February 28, 2001.

D'Amato, Martin J. "Vigilant Warrior: Gen Starry's Airland Battle and How Much it Changed The Army." *Armor: The Professional Journal of the US Army*. May-June 2000.

Deal, Terrence and Allan Kennedy. *Corporate Cultures: The Rights and Rituals of Corporate Life*. New York: Addison-Wesley Publishing Company, Inc., 1982.

Department of the Air Force, United States of America. *Air Force Transformation Flight Plan.* Washington D.C.: 2004.

Department of the Army, United States of America. *Army Transformation Roadmap: A Campaign Quality Army with Joint and Expeditionary Capabilities.* Washington D.C.: July 2004.

Department of Defense, Office of Force Transformation. *Transformation Planning Guidance*. Washington D.C.: April 2003.

Department of the Navy, United States of America. *Navy Transformation Roadmap: Assured Access and Power Projection…From the Sea.* Washington D.C.: 2003.

Director, Force Transformation, Office of the Secretary of Defense. *Elements of Defense Transformation*. Washington D.C.: 2004.

Director, Force Transformation, Office of the Secretary of Defense. *Military Transformation: A Strategic Approach.* Washington D.C., 2003.

Do We Need Four Military Forces? Video Transcript produced January 10, 1993 by America's Defense Monitor. Accessed August 17, 2005 at www.edi.org/adm/617/

Evans, Michael. *Cultural Implications of Hardening and Networking the Army*. Australian Army, Chief of Army Exercise, 2004.

Friedman, Thomas. *The World is Flat: A Brief History of the Twenty-first Century*. New York: Farrar, Straus, and Giroux, 2005.

Hammes, Colonel Thomas X. (USMC, Ret). "The Future of Warfare." *Re-thinking the Principles of War.* Edited by Anthony McIvor. Annapolis: Naval Institute Press, 2005.

_____. (USMC, Ret). *The Sling and the Stone: On War in the 21st Century*. St. Paul: Zenith Press, 2004.

Harris, Martha. "Energy and Security." *Grave New World: Security Challenges in the 21st Century.* Edited by Michael Brown. Washington, D.C.: 2003.

Hoffman, Stanley. "Clash of Globalizations." *Foreign Affairs*, Vol. 81, No. 4, July/August 2002.

Joint Warfighting Center, US Joint Forces Command. *Joint Doctrine Series Pamphlet 3, Doctrinal Implications of the Standing Joint Force Headquarters.* Naval Station Norfolk, VA: June 16, 2003.

Kugler, Richard and Hans Binnendijk. "Choosing a Strategy." *Transforming America's Military.* Edited by Hans Binnendijk. Washington D.C.: National Defense University Press, 2002.

Lagace, Martha. "Lou Gerstner Discusses Changing the Culture at IBM." *Harvard Business Week*. December 9, 2002. Accessed at http://hbswk.hbs.edu/item.jhtml?id=3209&t=finance&noseek=one on December 20, 2005.

Lind, William, Colonel Keith Nightengale (USA), ? Captain John F. Schmitt (USMC), Colonel Joseph W. Sutton (USA),?and Lieutenant Colonel Gary I. Wilson (USMCR). "The Changing Face of War: Into the Fourth Generation." *Marine Corps Gazette*, October 1989.

Manning, Robert. *The Asian Energy Factor: Myths and Dilemmas of Energy, Security, and the Pacific Future*. New York: Council on Foreign Relations, 2000.

Merriam-Webster's Collegiate Dictionary: Tenth Edition. Springfield, Massachusetts: Merriam-Webster Inc., 1993.

Metz, Steven. "Small Wars: From Low Intensity Conflict to Irregular Challenges." *Rethinking the Principles of War.* Edited by Anthony D. McIvor. Annapolis: Naval Institute Press, 2005.

Office of Force Transformation, Office of the Secretary of Defense. *Transformation Planning Guidance*. Washington D.C.: April 2003.

Office of the President of the United States. *Unified Command Plan.* Washington D.C.: March, 2005.

Office of the Secretary of Defense. *The Bottom-Up Review*. Washington D.C.: September 1, 1993.

_____. *The National Defense Strategy of the United States of America*. Washington D.C.: March, 2005.

_____. *Quadrennial Defense Review Report*. Washington D.C.: September 30, 2001.

_____. *Report of the Quadrennial Defense Review*. Washington D.C.: May 1997.

Ross, Christopher. "Pillars of Public Diplomacy." *Harvard International Review*, Volume 25, China, Summer 2003. Accessed at http://hir.harvard.edu/articles/?id=1117 on November 10, 2005.

Rumsfeld, Donald. "Secretary's Foreword." *Transformation Planning Guidance.* Office of Force Transformation. Washington D.C.: April, 2003.

Shelton, General Hugh (USA). "Statement of the Chairman of the Joint Chiefs of Staff." *Quadrennial Defense Review Report*. Washington D.C.: September 30, 2001.

Starry, Donn A. "To Change an Army." *Military Review.* March, 1983.

Stephenon, Barbara, Director of Planning, Office of the Coordinator for Reconstruction and Stability, US Department of State. Presentation to the Joint Forces Staff College. Naval Station, Norfolk: February 1, 2006.

Sweeney, Patrick. "Effects Based Confusion: The Missing Link with Operational Art." *Emerging Concepts Reading NWC 2073*. Newport, Rhode Island: Naval War College, December 1, 2005.

Toffler, Alvin, and Heidi Toffler. *War and Anti-War: Making Sense of Today's Global Chaos.* New York: Warner Books, Inc., 1993.

About the Author

Lieutenant Colonel Jim Sears is an Air Force Student at the Joint Advanced Warfighting School. He is an F-16 pilot with combat tours in Operations Southern Watch and Enduring Freedom and was an Airborne Forward Air Controller during Operation Anaconda. His staff experience is at the Air Force Major Command level. Lt Col Sears is a 1991 graduate of the United States Air Force Academy, USAF Squadron Officers' School, Air Command and Staff College (non-residence), and Air War College (non-residence). He is currently projected for reassignment to Luke AFB, Arizona.